REMARKS

Claims 1-47 are pending in this application. Claims 1-34, 36-39, 41-44, and 46-47 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,430,729 ("Rahnema") in view of U.S. Patent Publication No. 2005/0036442 ("Saleh"). The Action Summary notes that claims 35, 40, and 45 are also rejected, but the Action provides no basis for their rejection.

Applicant traverses the rejection and requests reconsideration in light of the following remarks:

Independent Claims 1, 8, 23, and 30 Patently Distinguish Over Rahnema and Saleh

Each of independent claims 1, 8, 23, and 30 requires (1) a batch of forwarding tables that includes a primary forwarding table and a plurality of backup forwarding tables for each node in a network; and (2) a message from a node that instructs other nodes in the network to switch from a current forwarding table to one of the backup forwarding tables associated with an identified link. Rahnema and Saleh, alone or in combination, fail to describe, teach, or suggest this subject matter.

First, Rahnema and Saleh fail to describe, teach, or suggest a primary forwarding table and a plurality of backup forwarding tables. The Action asserts that the exit link choices in FIG. 5 of Rahnema constitute the recited subject matter. (Office Action, page 3.) Applicant disagrees. FIG. 5 of Rahnema shows a routing table which includes, for each destination node, first choice, second choice, and third choice exit link designators as columns in the table. That is, Rahnema describes a routing table with backup routing information for certain individual links. Contrary to the Action's contention, Rahnema does not describe, teach, or suggest a distinct primary forwarding table and a plurality of backup forwarding tables as recited in claims 1, 8, 23, and 30. In particular, unlike use of single backup links, use of distinct backup forwarding tables advantageously permits nodes in a network to react to global changes in network topology (such as a broken node that is used by multiple links) without having to relearn such changes at each node that is affected. Saleh fails to make up this deficiency in Rahnema

2

because Saleh describes a network having a primary path and a secondary path between source-destination pairs (Saleh, FIG. 2), not primary and backup forwarding tables.

Applicant pointed out this deficiency in Rahnema in its previous response filed on October 14, 2008. The Action, however, fails to address Applicant's remarks. If the Examiner maintains the § 103 rejection of these claims, Applicant respectfully request that the Examiner respond with specificity to applicant's remarks regarding this deficiency in the cited references.

Second, Rahnema cannot be modified such that a node notifies other nodes to switch to a backup forwarding table, as recited in claims 1, 8, and 23, without changing the basic principle of operation of Rahnema. It is well-established that under § 103, any proposed modification cannot change the principle of operation of a reference (MPEP 2143.01). Rahnema states that "[u]pdates of the system configuration in response to link failures are desirably done on a threshold basis (i.e., when a certain number or pattern of link failures is reported to the SCS [system control segment])" (column 10, lines 50-53), and that "SCS involvement is required for utilizing failure information" (column 10, lines 56-58, emphasis added). These passages indicate that Rahnema operates on a principle that relies on the control station, and not network nodes, for coordinating the network's response to link failures. In particular, even though an individual node in Rahnema may switch to an alternate exit link when it detects a failed link, Rahnema requires that other nodes that have not detected the failures refrain from switching links, unless the control station updates the system configuration. Thus, modifying Rahnema so that a node that detects a link failure instructs other nodes to switch to a backup forwarding table would contradict Rahnema's express requirement of leaving such decision-making to the dictates of a control station.

Third, even if Rahnema could somehow be modified while maintaining its principle of operation, one of ordinary skill in the art would not be motivated to combine Rahnema with Saleh. While the Supreme Court, in *KSR Int'l Co. v. Teleflex, Inc.*, determined that the teaching, suggestion, or motivation ("TSM") test cannot be applied rigidly, the Court acknowledged that the TSM test captures a helpful insight and is one of a number of rationales that could be used to determine obviousness (KSR, 127 S.Ct. 1727, 1737 (2007)). Indeed, the present Action relies on

3

this rationale. Here, however, one skilled in the art would not be motivated to combine Saleh with Rahnema because the two references are directed to routing data over very different types of networks. In particular, Rahnema is directed to satellite networks with mobile nodes, while Saleh is directed to an optical network with fixed nodes. In a mobile network, unlike a network with fixed nodes, each node is free to move independently in any direction, and will therefore route data traffic differently over time depending on both quality of service metrics of various links, as well as the then current topology of the network. In contrast, a network with fixed location nodes need merely be concerned with quality of service metrics when routing, as the topology is for the most part constant. As a result of the mobility, networks with mobile nodes, such as those in Rahnema, face unique complex challenges in maintaining the information required to properly route traffic in the network that are just not an issue for fixed topology networks. One of ordinary skill in the art would therefore not be motivated to combine teachings from a reference describing routing methodologies in a fixed topology network to address problems in a network with mobile nodes.

For at least the foregoing reasons, Rahnema and Saleh fail to describe, teach, or suggest the subject matter of claims 1, 8, 23, and 30. Applicant therefore requests reconsideration and withdrawal of the § 103 rejection of independent claims 1, 8, 23, and 30. Claims 2-7, 9-13, 24-29, and 31-34, depend from claims 1, 8, 23, or 30 and add further limitations thereto. Applicant therefore requests reconsideration and withdrawal of the § 103 rejections of these claims as well.

Original Independent Claim 14 Patently Distinguishes over Rahnema and Saleh

Original independent claim 14 recites a network node including memory that stores a first primary forwarding table and a first plurality of backup forwarding tables. The node also includes a processor that replaces the first primary forwarding and the first backup forwarding tables with a second primary forwarding table and a second plurality of backup forwarding tables, respectively.

Applicant's prior response to the Non-Final Office Action of May 14, 2008, pointed out that the rejection of claim 14 therein completely failed to address this subject matter or to

identify any particular section of Rahnema or Saleh that describe, teach, or suggest this subject matter. The current action fails to remedy this deficiency in the rejection. Moreover, Applicant has carefully reviewed the cited references and finds, on the basis of this review, that Rahnema and Saleh, alone or in combination, fail to describe, teach, or suggest this subject matter. Thus, Applicant requests reconsideration and withdrawal of the § 103 rejection of independent claim 14.

If the Examiner intends to maintain this rejection, Applicant requests that the Examiner point, with specificity, to where this subject matter is described in Rahnema and/or Saleh. Claims 15-22 depend from claim 14 and add further limitations thereto. Applicant therefore also requests reconsideration and withdrawal of the § 103 rejections of claims 15-22 for the same reasons.

Independent Claims 36, 41, and 47 Patently Distinguish over Rahnema and Saleh

Each of independent claims 36, 41, and 47 requires detecting a change in a quality of an inbound or outbound link associated with a node in a network. In response to said detection, a message is generated that identifies the detected link and instructs one or more nodes in the network to switch to a backup forwarding table associated with the detected link. As set forth above, Rahnema and Saleh fail to describe, teach, or suggest this subject matter.

Applicant therefore requests reconsideration and withdrawal of the § 103 rejection of independent claims 36, 41, and 47. Claims 37-39 and 42-44 depend from claims 36 or 41 and add further limitations thereto. Applicant therefore also requests reconsideration and withdrawal of the rejection of these claims for at least the same reasons.

Rejection of Independent Claims 35, 40, and 45 Must be Supported by a Statutory Basis

The Action Summary notes that independent claims 35, 40, and 45 are rejected but provides no statutory basis for their rejection. If the Examiner intends to maintain this rejection, Applicant requests that the Examiner specify under which statutory provision the rejection is

5

made and point, with specificity, to where the subject matter of the claims is described in the
cited references.

In view of the above amendment, applicant believes the pending application is in
condition for allowance.

Applicants believe no fee is due with this response, aside from the fee associated with a
two month Petition for Extension of Time, which is included herewith. However, if an
additional fee is due, please charge our Deposit Account No. 18-1945, from which the
undersigned is authorized to draw.

Dated: <u>June 22, 2009</u>   Respectfully submitted,

By____/Regina Sam/_____
Regina Sam
    Registration No.: L0381
ROPES & GRAY LLP
One International Place
Boston, Massachusetts 02110
(617) 951-7000
(617) 951-7050 (Fax)
Attorneys/Agents For Applicant